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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/747,642	12/22/2000	Brady J. Moroney	D-2696/WOD	4538

7590

01/04/2006

The Trane Company  
Patent Department - 12-1  
3600 Pammel Creek Road  
La Crosse, WI 54601

EXAMINER
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ROBINSON BOYCE, AKIBA K

ART UNIT	PAPER NUMBER
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3639

DATE MAILED: 01/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/747,642

Applicant(s)

MORONEY ET AL.

Examiner

Akiba K. Robinson-Boyce

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Status of Claims*

1. Due to communications filed 12/15/05, the following is a non-final office action. Claims 1-22 are pending in this application. The previous rejection has been withdrawn, and claims 1-22 are rejected as follows.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miesbauer et al (US 6,760,767), and further in view of Kawas et al (US 6,058,262).

As per claim 1, Miesbauer et al discloses:

developing an electronic specification describing the product and its components, (col. 7, lines 9-26, system id..., etc, info on system components entered via laptop computer, w/ col. 4, lines 32-54, shows a plurality of subscribing stations for entering in product info through transmitting data to the systems);

forwarding the electronic specification to one of the several companies, (col. 3, lines 27-33, receiving product data electronically);

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the specific company appending the test results to the electronic specification, (col. 9, lines 55-63, problem/solution report appended to the report based on results);

the specific company testing the component product, (col. 8, lines 43-47, test is initiated);

the specific company determining if the product is completed, (Col. 9, lines 55-59, determining if checkout is or is not successful); and

either shipping the completed product to the customer or forwarding the electronic specification with appended test results to another one of the several companies, (Col. 10, lines 1-6, an e-mail is sent with a file attachment of the report).

Miesbauer et al does not specifically disclose the specific company building the component or product in accordance with requirements in the electronic specification, but does disclose in-field products controlled by software which allows users at substations to upgrade, maintain and service products according to submitted customer and product data in the abstract, lines 1-13, where upgrading a product requires additional manufacturing of the product.

However, Kawas et al discloses:

the specific company building the component or product in accordance with requirements in the electronic specification, (Col. 5, lines 43-45, generating a product design that is based on specifications). Kawas et al discloses this limitation in an analogous art for the purpose of showing the creation of a design that defines characteristics needed in the products of a desired network.

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It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the specific company build the component or product in accordance with requirements in the electronic specification with the motivation of creating a product that meets certain product and customer requirements.

As per claim 2, Miesbauer fails to disclose wherein the forwarding step includes the step of providing a central server to centralize the forwarding step, but does disclose that the subscribing stations are connected to an on-line center through a communications link in col. 4, lines 40-41, in this case the on-line center acts as the central system.

However, Kawas et al discloses:

wherein the forwarding step includes the step of providing a central server to centralize the forwarding step, (Col. 1, lines 1-6, all network computers managed by a central server). Kawas et al discloses this limitation in an analogous art for the purpose of showing how the computers of the network are controlled.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for the forwarding step to include the step of providing a central server to centralize the forwarding step with the motivation of allowing data transmitted to become identified with the system by passing through a central location.

As per claims 3, 17, Miesbauer et al does not specifically disclose providing a bill of materials for the components and the product at the time the electronic specification is developed, or wherein the generating step includes the further step of creating a bill

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of materials and a specification, however does disclose developing an electronic specification for a product in col. 7, lines 9-26.

However, Kawas et al discloses:

providing a bill of materials for the components and the product at the time the electronic specification is developed/creating a bill of materials and a specification (Col. 6, line 67-Col. 7, line 4, [bill of materials]). Kawas et al discloses this limitation in an analogous art for the purpose of showing that a bill of material is applicable to a specific network segment.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide a bill of materials for the components and the product at the time the electronic specification is developed with the motivation of providing billing information according to specific instructions.

As per claims 4, 21, Miesbauer et al does not specifically disclose periodically comparing the bill of materials to the electronic specification to verify the accuracy of both or wherein the installation developing sequence includes a further step of cross checking the bill of materials with the installation sequence, but does disclose developing an electronic specification for a product in col. 7, lines 9-26.

However, Kawas et al discloses:

periodically comparing the bill of materials to the electronic specification to verify the accuracy of both/ wherein the installation developing sequence includes a further step of cross checking the bill of materials with the installation sequence, (Col. 5, lines 35-42, [bill of materials for network segment], and col. 7, lines 2-4, [shows validation of

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infrastructure specification], Fig. 11 shows comparison of total cost versus a description of the part used]). Kawas et al discloses this limitation in an analogous art for the purpose of showing that the infrastructure is validated for verify that the correct parts are used.

As per claim 5, Miesbauer et al fails to disclose step of saving at least one updated version of the electronic specification, but does disclose developing an electronic specification for a product in col. 7, lines 9-26, and upgrades in col. 10, lines 33-38.

However, Kawas et al discloses:  
step of saving at least one updated version of the electronic specification, (Col. 7, lines 15-18, entering additional specifications, then generate a design, in this case, the additional specifications must be saved on some type of memory so it can be later accessed for design implementation). Kawas et al discloses this limitation in an analogous art for the purpose of showing that updated versions of the specification can be implemented in the product design.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to save at least one updated version of the electronic specification with the motivation of having the means to produce an updated product.

As per claims 6/8, Miesbauer et al discloses:  
comparing the updated version of the electronic specification with an electronic specification having appended test results/comparing the revised updated version of the electronic specification with an electronic specification having appended test results;

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wherein the comparing step includes the steps of determining and implementing late customer changes to the electronic specification in the product or components, (Col. 9, lines 35-63, shows problem/solution report is appended to the connectivity report, also, col. 10, lines 33-38, shows system used for upgrades, meaning that each time an upgrade is attempted by the system, the results of the upgraded product specifications are appended to the connectivity report, and the process is repeated to determine if checkout is successful by comparison information obtained from databases).

As per claim 7, Miesbauer et al fails to disclose the step of revising the updated version to include late customer changes, but does disclose developing an electronic specification for a product in col. 7, lines 9-26, and upgrades in col. 10, lines 33-38.

However, Kawas et al discloses:

the step of revising the updated version to include late customer changes, (col. 7, lines 18-24, modify the design). Kawas et al discloses this limitation in an analogous art for the purpose of showing that late changes to the specification can be implemented in the product design.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to revising the updated version to include late customer changes to the specification with the motivation of having the means to produce an updated product.

As per claim 9, Miesbauer et al discloses:

generating a...order in an electronic form, (col. 7, lines 9-26, system id..., etc, info on system components entered via laptop computer, w/ col. 4, lines 32-54, shows a



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plurality of subscribing stations for entering in product info through transmitting data to the systems);

transferring the electronic build document to a first company for the construction of a first subassembly for the product, (col. 3, lines 27-33, receiving product data electronically);

testing the subassembly of the first company, (col. 8, lines 43-47, test is initiated);  
attaching the test results to the electronic build document, attaching a communications bus to the product, (Abstract, lines 13-17, configuration module loaded to allow future communications);

testing the operability of the bus, (Col. 8, lines 53-67, system waits for a new call, success is then validated)

adding the bus operability test results the electronic build document, (Col. 9, lines 3-8, connectivity report indicating whether valid connectivity was achieved);

The following is obvious with Miesbauer et al since the order information is electronically created and must be transferred from a substation to a centralized on-line center for product development:

converting the...order to an electronic build document

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to convert an order to an electronic build document with the motivation of creating a document that can be transmitted to the entity building the product.

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Miesbauer et al fails to disclose shipping the product, but does disclose delivering the product by transmitting the configuration for to the subscribing station in the abstract, lines 13-15, therefore shipping the product is obvious since shipping is a form of delivery).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to ship the product with the motivation of delivering the product to the entity that initiated product specifications.

Miesbauer et al does not disclose a sales order for a product, but does disclose a product order in the abstract lines 4-13.

However, Kawas et al discloses:

A sales order, (Col. 4, lines 36-39, shows maximum price for sales engineers are included in the database). Kawas et al discloses this limitation in an analogous art for the purpose of showing that sales can be implemented in the generation of a design of desired products.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to incorporate a sales order into a system for manufacturing a product with the motivation of implementing sales into the steps of product development.

Miesbauer et al does not specifically disclose forwarding the electronic build document to a second company for main assembly, but does disclose a plurality of substations in col. 4, lines 32-34.

However Kawas et al discloses:

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forwarding the electronic build document to a second company for main assembly, (col. 7, lines 56-60, and col. 8, lines 45-47, [where a communication characteristic between two of the products for a complete design of desired products is housed in two physical locations, such as two different sites, or can be extended to may sites], Col. 8, line 15-19, [shows transmitting information between two sites]). Kawas et al discloses this limitation in an analogous art for the purpose of showing that each product used for final design is processed in the location in which the communication characteristic exists, which are separate locations, and that these separate locations communicate data to one another.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to forward the electronic build document to a second company for main assembly with the motivation of utilizing a wide variety of parts for a final design.

Neither Miesbauer et al, nor Kawas et al specifically disclose attaching the first subassembly to the bus, testing the operability of the first subassembly and the bus, and attaching the subassembly and bus operability test results to the electronic build document, but Miesbauer et al does disclose a signal embodied in a carrier wave representing a set of instructions to carry out the claimed invention in col. 14, lines 22-26.

However, official notice is taken that it is old and well known in the signal processing art to attach the first subassembly to the bus, test the operability of the first subassembly and the bus, and attach the subassembly and bus operability test results to the electronic build document. It would have been obvious to one of ordinary skill in

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the art at the time of the applicant's invention to attach the first subassembly to the bus, test the operability of the first subassembly and the bus, and attach the subassembly and bus operability test results to the electronic build document with the motivation of validating that the signals (and buses that are used for creating the transmission paths for those signals) that are produced in developing products are successfully operable with specific products.

As per claim 10, Miesbauer et al discloses:

generating a...order representative of a product; (col. 7, lines 9-26, system id..., etc, info on system components entered via laptop computer, w/ col. 4, lines 32-54, shows a plurality of subscribing stations for entering in product info through transmitting data to the systems);

developing build and test instructions from the sales order, ((col. 14, lines 40-44, transferring a known file and initiating a dial-out test);

developing an installation sequence from the build and test instructions, (Col. 7, lines 40-44, configuration module is created with system specifications, w/ col. 8, lines 43-47, test is initiated); and

Miesbauer et al does not specifically disclose building the product using the build and test instructions in the sequence laid out by the installation Sequence but does disclose in-field products controlled by software which allows users at substations to upgrade, maintain and service products according to submitted customer and product data in the abstract, lines 1-13, where upgrading a product requires additional manufacturing of the product.

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However, Kawas et al discloses:

building the product using the build and test instructions in the sequence laid out by the installation Sequence, (Col. 5, lines 43-45, generating a product design that is based on specifications). Kawas et al discloses this limitation in an analogous art for the purpose of showing the creation of a design that defines characteristics needed in the products of a desired network.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to build the product using the build and test instructions in the sequence laid out by the installation Sequence with the motivation of creating a product that meets certain product and customer requirements.

As per claim 11, Miesbauer et al discloses:

wherein the developing and building steps are performed under the control of a control device, (Abstract, lines 4-7, controlled by software).

As per claim 12, Miesbauer et al discloses:

wherein the product includes a communications bus, and input and output components to be operably linked to the bus, (Col. 7, lines 44-65, shows communication with product initialized, also shows input/output with a communication link).

As per claim 13, Miesbauer et al et al discloses:

wherein the developing an installation sequence step is accomplished by a tester device which also oversees the building step, (col. 8, lines 37-47, known stored file from subscribing station represents the tester).

As per claim 14, Miesbauer et al fails to disclose calling for the next input or output component to be operably connected to the communication bus as identified by the installation sequence; and verifying the operability of the component and the bus, but does disclose interconnected server nodes in col. 4, line 42.

However, Kawas et al discloses:

calling for the next input or output component to be operably connected to the communication bus as identified by the installation sequence; and verifying the operability of the component and the bus, (Col. 7, lines 45-50, [retrieving additional specifications and repeating the step of validating]). Kawas et al discloses this limitation in an analogous art for the purpose of showing that steps are not restricted to just once sequence.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to call for the next input or output component to be operably connected to the communication bus as identified by the installation sequence; and to verify the operability of the component and the bus with the motivation of incorporating changes that could be made as a result of including additional buses.

As per claims 15, 16, Miesbauer et al discloses:

Receiving a first signal from the component by means of bus; determining a unique identity for the signaling component; responding by means of bus with a second signal to the component providing the component with an identity/wherein the responding step further includes the step of providing the signaling component with operational parameters, (col. 14, lines 22-36, shows a computer data signal

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representing a set of instructions for the verification of connectivity for a specific subscribing station, therefore identification must take place in order to know which station is being connected, and a bus/signaling component with operational parameters is obvious since signals communicate via transmission path, which is created by the buses, and each signal always operates, and is determined by the path that it must be transmitted through.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to receive a signal by means of a bus, to determine a unique identity, and to provide the signaling component with operational parameters with the motivation of having means to create a transmission path and to properly identify the station from which the signal is being sent from.

As per claim 18, Miesbauer et al discloses:

Wherein the developing the build and test instruction step includes the further step of using the specification to create a build and test file, (col. 14, lines 40-44, transferring a known file and initiating a dial-out test).

As per claim 19, Miesbauer et al discloses:

Wherein the build and test file is in the xml format, (Col. 6, lines 50-53, XML).

As per claim 20/22, Bradbury et al discloses:

Wherein the installation sequence developing step includes the further step of cross checking the installation sequence with the specification/wherein the verifying step includes the further steps of testing the operation of the communications bus, testing the operation of the component, and cross checking the identity, parameters and

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the operation of the component and the bus with the specification, (Col. 8, lines 43-47, verifying correctness and connectivity of the configuration file, also shows dial-out test where all functionality must be working in order to have connectivity).

***Response to Arguments***

4. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is 571-272-6734. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on 571-272-6708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7238 [After final communications, labeled "Box AF"], 703-746-7239 [Official Communications], and 703-746-7150 [Informal/Draft Communications, labeled "PROPOSED" or "DRAFT"].

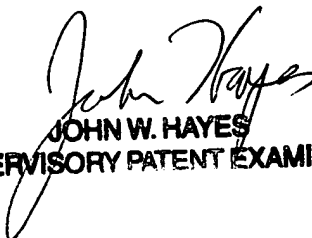
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-

3900.



A. R. B.

December 22, 2005



JOHN W. HAYES  
SUPERVISORY PATENT EXAMINER